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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/550,824 | 07/20/2006 | Akira Hirano | 0388-052835 | 1782 |

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EXAMINER

NGUYEN, KHIEM D

ART UNIT PAPER NUMBER

2823

MAIL DATE DELIVERY MODE

06/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary

Application No.

10/550,824

Applicant(s)

HIRANO ET AL.

Examiner

Khiem D. Nguyen

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

1. The preliminary amendment filed on September 23rd, 2005 has been entered.

Oath/Declaration

2. The oath/declaration filed on July 20th, 2006 is acceptable.

Information Disclosure Statement

3. The Information Disclosure Statement filed on November 22nd, 2006 has been considered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

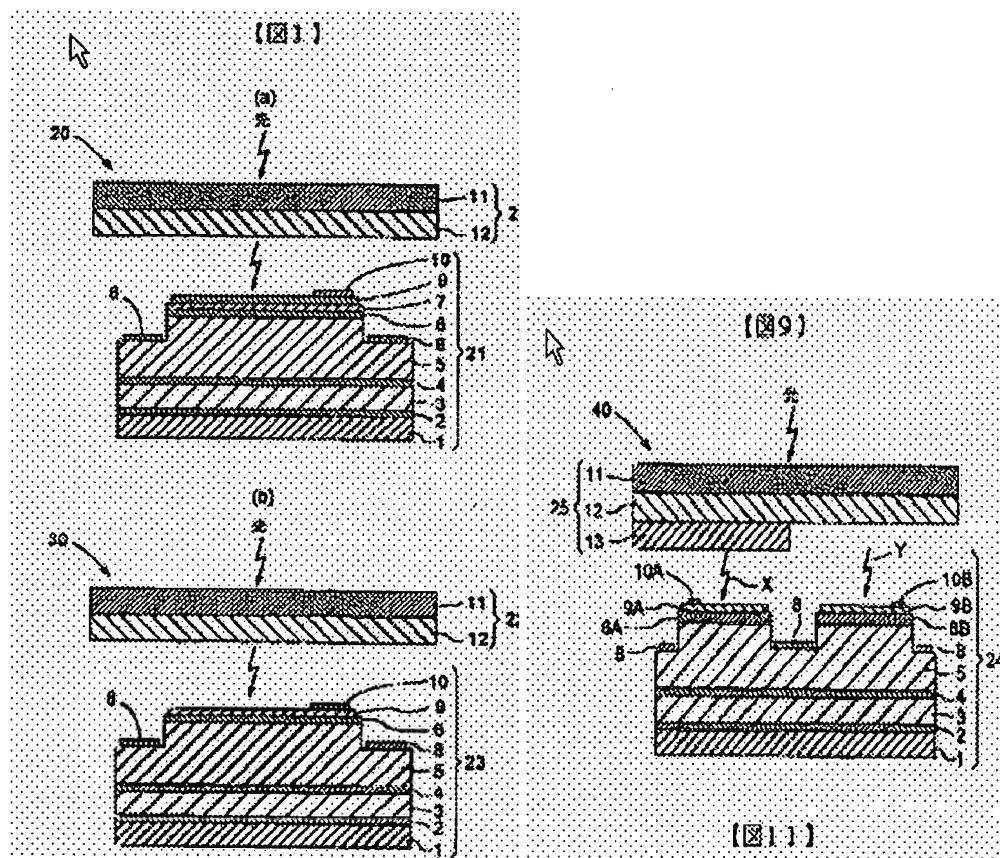
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirano et al. (JP Pub. 2003057111, English Translation).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

In re claim 10, **Hirano** discloses a photosensor having a filter function, comprising: filter device 22 having a colored glass filter and configured for permitting transmission of light of a predetermined wavelength range including a detection target wavelength range (Detailed Description, Pages 7-8, paragraph [0044] and FIGS. 1 and 9); and



a light receiving device 21 for receiving the light transmitted through the filter device 22; wherein said filter device 22 includes a first interference filter structure 11 comprised of a plurality of light transmitting layers stacked on each other (means, page 9, paragraph [0059]) the first interference filter structure 11 being deposited on a face of the colored glass filter 12; said light receiving device 21 includes a semiconductor

photodetector structure having one or more semiconductor layers 5, 6, 7 a light receiving area being formed in the one or more semiconductor layers 5, 6, 7 within the semiconductor photodetector structure (Detailed Description, page 8, paragraph [0045]); and said one or more semiconductor layers 5, 6, 7 forming the semiconductor photodetector structure contain $\text{In}_x\text{Al}_y\text{Ga}_{1-x-y}\text{N}$ ($0 \leq X \leq 0.21$, $0 \leq Y \leq 1$) (Detailed Description, page 8, paragraphs [0046]-[0047]).

In re claim 11, as applied to claim 10 above, Hirano discloses all claimed limitations including the limitation wherein said filter device further includes a second interference filter structure 13 comprised of a plurality of light transmitting layers stacked on each other, the second interference filter structure 13 being deposited on another face of the colored glass filter 12 opposite to the one face on which said first interference structure 11 is deposited (Means, page 9, paragraph [0059], page 10, paragraph [0068] and FIG. 9).

In re claim 12, as applied to claim 10 above, Hirano discloses all claimed limitations including the limitation wherein said interference filter structure 11, 13 contains at least one of SiO_2 and HfO_2 , with an exposed surface of the interference filter structure 11, 13 being formed of the oxide (Means, page 9, paragraph [0059]).

In re claim 13, as applied to claim 10 above, Hirano discloses all claimed limitations including the limitation wherein a longer wavelength end wavelength of said detection target wavelength range corresponding to an absorption end wavelength of said light receiving area is set near a longer wavelength end wavelength of a light transmission wavelength range of said filter device; and a first sensitivity for a

predetermined first wavelength included within said detection target wavelength range has a value 10,000 times or more greater than a value of a second sensitivity for a second wavelength which is outside said detection target wavelength range and which is 50 nm longer than said first wavelength (Detailed Description, page 3, paragraph [0013]).

In re claim 14, as applied to claim 13 above, Hirano discloses all claimed limitations including the limitation wherein said longer wavelength end wavelength of said detection target wavelength range is 400 nm \pm 20 nm (Detailed Description, page 2, paragraph [0007]).

In re claim 15, as applied to claim 13 above, Hirano discloses all claimed limitations including the limitation wherein said longer wavelength end wavelength of said detection target wavelength range is 365 nm \pm 20 nm (Detailed Description, page 2, paragraph [0005]).

In re claim 16, as applied to claim 13 above, Hirano discloses all claimed limitations including the limitation wherein said longer wavelength end wavelength of said detection target wavelength range is 315 nm \pm 20 nm (Detailed Description, page 2, paragraph [0005] and page 7, paragraph [0038]).

In re claim 17, as applied to claim 13 above, Hirano discloses all claimed limitations including the limitation wherein said longer wavelength end wavelength of said detection target wavelength range is 280 nm \pm 20 nm (Detailed Description, page 7, paragraph [0040]).

In re claims 18-25, as applied to claims 10-17, respectively, above, Hirano discloses all claimed limitations including the limitation wherein the photosensor 21

being sealed with nitrogen gas or inert gas (Detailed Description, paragraphs [0045]-[0047] and FIGS. 1 and 9).


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem D. Nguyen whose telephone number is (571) 272-1865. The examiner can normally be reached on Monday-Friday (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K.N.
June 10, 2007


BROOK KEBEDE
PRIMARY EXAMINER